

MEMORANDUM

Meeting of Soviet-American

Expert Group on

Project 3: "Management Systems for Urban Passenger
Transportation"

Project 4: "Urban Goods Distribution"

developed under theme 3: "Application of Computers in
Management of Large Cities"

In accordance with the agreement between the U.S.S.R. and the U.S.A. on scientific-technical cooperation and in accordance with the report of the Joint Soviet-American working group on cooperation in the application of computers to management signed in Moscow on November 28, 1973, which defines theme 3 as: "Application of Computers in Management of Large Cities", and in accordance with the working plans of the expert group on this theme for 1975 agreed upon beforehand, there was a meeting (seminar) of managers and experts on Projects 3 and 4, theme 3 held in the U.S.S.R. from April 10 to 23, 1975. List of participants is enclosed (Appendix 1).

During the meeting reports were presented by the Soviet and American experts on the following topics;

By the Soviet specialists:

- "Main directions of work to improve management of truck transport".
- "Application of computer techniques to public transport management".
- "Problems of Automated Management Systems (AMS) design for public transport in large cities".
- "Processing of information on city passenger flows and computerized analysis of passenger-flow dynamics".
- "Methods of choosing the optimal scheme of bus routes in a city with the help of the computer".
- "Computerized system of operations planning of truck transport".
- "Computerization of truck transport management".

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- "Management models for urban transport flows in cities".
- "Improvement of the management of a transport combine".
- "Main concepts and functional structure of AMS Glavmosavto-trans".
- "Computer application experience in the management of the city truck transport in Moscow".
- "Planning of operational bus routes".
- "The role of the computing centre in large city public transport management".
- "Computer scheduling of equipment movement".
- "Computerized system of taxi dispatching in a city".
- "Centralized systems of receiving and implementing orders for taxis from citizens".

The following reports were presented by the American specialists:

- "The management of the United parcel Service".
- "Freight: The other urban transportation problems".
- "The demand for freight and the freight system of Tri-State Region".
- "Roadway pricing as an essential key to efficient urban transport".
- "The Federal Urban Mass Transportation Administration: Activities and Issues".
- "Management Systems in the Metropolitan Transportation Authority of New York State".
- "The General structure of Transportation agencies in the United States".

There was an exchange of opinions between Soviet and American experts on the themes of the seminar. During the meeting a discussion took place between Soviet and American experts on problems connected with projects 3 and 4, theme 3, "The Application of Computers in the Management of Large Cities". The discussion and the meeting were carried out in a friendly atmosphere and were fruitful for both sides.

Besides the main meetings, the members of the American side visited the Main Computing Centre of the Ministry of Auto-Transport. They also introduced themselves

with projects which were carried out there in the field of designing AMS for automobile transport. They also visited Autocombinat No.1 of Glavmosavtotrans.

The American delegation visited the Computing Centre of Glavlensavtotrans.

During the meeting Soviet and American experts exchanged scientific-technical information on the problems concerning projects 3 and 4 and answered questions posed by both sides.

It was agreed upon by the experts that steps carried out within the framework of Soviet-American scientific-technical cooperation in the field of computer application for large city management (projects 3 and 4) would be directed towards acquiring methodological and practical results.

It was believed to be useful that further efforts under projects 3 and 4 should be carried out in accordance with the agreed upon list of problems (Appendix II and III) for consideration in those projects. Deviations from the list are to be allowed only in case a necessity arises to fully describe the singularities of the organisation and management of passenger and truck transport of each of the cooperating sides.

American participants at the Seminar, with the aim of speeding up of work under projects 3 and 4 which are somewhat lagging as compared with the works under projects 1, 2 and 5, suggested that the next working meeting of experts on projects 3 and 4 should be held in the U.S.A. in November-December 1975. Soviet participants at the seminar believe the suggestion to be reasonable.

In this connection there is a feeling that the Coordinators for theme 3, both of the Soviet and American sides should be kindly requested to make necessary arrangements for such a meeting by September. These arrangements should include proposed subjects for papers and a tentative agenda.

It is the general opinion that the main task of the meeting should be constructive discussion of the working materials, prepared under projects 3 and 4 in accordance with Appendix 2 and 3. Besides, final date and order of work to continue and

conclude projects 3 and 4 should be determined at that meeting. Approved For Release 2001/11/19 : CIA-RDP79-00798A000200020008-6

All the participants of the seminar held in Moscow and Leningrad during April 10 to 23 consider it to have been very fruitful and believe that the exchange of information and the mutual understanding achieved in the course of the seminar will greatly assist the successful and speedy development of projects 3 and 4, theme 3 "Application of Computers in a Large City Management".

Signed in two copies in Moscow April 22, 1975, in English and Russian each copy is equally authentic.

On Soviet side:

Prof. Kerov I.P.
Head of USSR delegation,
group of experts on projects
3 and 4.

S. Grava

On American side:

Prof. Grava S.
Head of USA delegation,
groups of experts on project
3 and 4

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To the memorandum of Meeting of Soviet-American expert groups on the theme 3:
"Application of Computers to Management of Large Cities"
(Project 3 and 4)

A list of participants at the meeting Soviet and American expert groups on project 3: "Management Systems for Urban Passenger Transportation" and project 4: "Urban Goods Distribution"

American participants:

- | | |
|-----------------------|---|
| Dr. Sigurd Grava | - Professor of Urban Planning
Columbia University: transportation planning, especially for intra-urban goods movement (Head of Delegation) |
| Mr. Thomas C. Browne | - Director of Transportation Affairs, United Parcel Service: movement of urban goods in congested cities |
| Dr. Charles A. Hedges | - Senior Economist; Office of Policy Development, U.S. Department of Transportation: intra-city goods distribution |
| Mr. Paul A. Lotto | - Director, Systems and Computer Services, Metropolitan Transportation Authority (New York): management information systems in mass transit environment |
| Mr. Stephen McConahey | - Director, Office of Transit Management, Urban Mass Transit Administration, U.S. Department of Transportation |
| Dr. William Vickrey | - McVickar Professor of Political Economy, Columbia University: the economics of transportation pricing |

Mr. John A. Kaiser

- Assistant coordinator for Topic 3: municipal service systems

Soviet participants:

Dr. Tkachenko P.N.

- Coordinator for Topic 3
- Director, The Main Sci-research Computing Centre Moscow City Council

Mr. Kozlov S.I.

- team member senior expert Committee for science and Technology Under USSR Council Ministers

Mr. Andreyev E.V.

- team member senior expert Committee for science and Technology Under USSR Council Ministers

Project 3.

Prof. Kerov I.P.

- Project head, The Main Sci-research Computing Centre, Moscow City Council

Mr. Chorovitch B.G.

- Member, working group, Dpt for Passenger Transport Moscow City Council

Mr. Ivanov V.I.

- Member, working group Research Institute for Automobile Transport

Project 4.

Mr. Podkladov Y.S.

- Member, working group Computer Centre for Leningrad Automobile Transport System. Ministry of Autotransport Russian Federation

Mr. Lvin M.E.

- Member, working group, Moscow Transportation Authority Russian Federation Ministry of Autotransport.

Mr. Kim K.V.

- Member, working group,
Institute of Economic and Mathematics

Mr. Alekseev V.L.

- Member, working group,
Department for AMS development
Moscow Municipality

Mrs. Sazonova N.Y.

- Assistant coordinator for Topic 3
The Main Sci-research Computing Centre,
Moscow City Council

APPENDIX II

Project 3

Administrative Systems of City Public Transport.

Administrative Problems.

A. Definition: the city public transport includes metro, bus, street car, r.w. transport from suburbs to city ("regular" r.w. service), taxi parks, cheap taxi service, water transport, usage of change stations (bus, stops, trips).

B. Public Transport System Design.

I. Organizations offering transport services;

a) Types:

- 1) methods of movement (bus, metro, street car, taxi, r.w.),
- 2) planning, including technical indicators for planning and analysis,
- 3) running of economy,
- 4) regulation (operative management),
- 5) finance.

b) Information on each organization:

- 1) personnel,
- 2) budget,
- 3) income, expenditure,
- 4) specific responsibility for various types of service.

c) Information on existing transport organizations:

- 1) information on trips, number of passengers, dispatch and destination stations etc.,
- 2) type and quantity of equipment (equipment and depot facilities),
- 3) types of services (frequency and quality),
- 4) cost of various types of services.

2. Planning of Transport Systems Development.

a) Definition of requirements:

- 3) how the priorities are defined, how the decision is made for the extension of line,
 - 4) how the decision is made for substitution, application of various systems (i.e. bus instead of metro etc.),
 - 5) are there public discussions, "advisory" committees.
- b) What is the role of manager or administrator in planning of goods movement:
- does he have an influence on the plan,
 - his part in plan.

3. How the decisions are made:

- a) Interaction of the functions of transport while in movement; problems of environments; problems of economic nature and ground transport and land usage.
- b) The influence of other government bodies on the city operations.
- c) Are there problems at other operating organizations- distribution of responsibility in various governmental departments.
- d) How are the changes made or services improved.

C. Problems of operations.

1. Financing and pricing:

- a) Main categories of financing (by types of services):
 - 1) costs of running the economy,
 - 2) public subsidies as compared with incomes from services.
- b) What is pricing policy; are there any possibilities not used yet.

2. The measures of performance and efficiency:

- a) What are the standards for running the economy,
- b) Information on service and control systems.

3. Usage of the equipment:

- a) Control and checking system.
- b) The degree of the system's efficiency.
- c) How the system is implemented to be efficient; minimizing the capital expenditures.

- d) What are motives for the equipment substitution.

- e) Control systems for maintaining the park inventory

4. Coordinating and integrating in one transport system (r.w., buses, metro and change stations).
5. Methods for routing and scheduling, including computerized methods.
6. Labour force: training and efficiency.
 - a) Quantity and speciality of those employed in various spheres.
 - b) Working hours, work distribution.
 - c) Special training.
 - d) Efficiency of undertaken steps and incentives, and their evaluation.
 - e) Incentives for drivers, managers.
7. Construction:
 - a) Technology of tunnel construction.
 - b) Problems of environment.
 - c) Metro: its substitution by surface ways.
 - d) New buses and new equipment of transport system (enlargement of capacities, equipment loads).
8. Safety:
 - a) The way it is implemented, what steps are undertaken.
 - b) Control for trains.
 - c) Design .
9. Cleanliness:
 - a) How it is achieved and maintained.
 - b) Standards.
10. Improvements requiring smaller investments (methods for improvement the traffic and transport system).
11. Singular or the most new methods of service (for instance, are there used only the routes defined beforehand).

D. Application of Computers and other Technology.

1. Planning and analysis; route and schedule.
2. Operating of the system, traffic regulation, fare collection.
3. Information for management systems.
4. Technology and labour efficiency.

E. Other Approved For Release 2001/11/19 : CIA-RDP79-00798A000200020008-6

1. Are there fixed prices and public information on them.

2. To what degree planning and use of public transport is influenced by use of private cars.
3. To what degree the service of public transport operating on schedule on certain routes depend on citizens.
4. How the information on RAND and other technical explorations is transfered between government bodies on various levels: from research institutions to operating organizations.

Project 4

Urban Goods Distribution¹ Outline of Framework for Cooperation

A. Description of Existing Urban Freight Systems

1. total amount (in tons, cubic meters, or other relevant measure), with analysis by broad commodity grouping
2. how are urban goods moved; what types or forms of movement, vehicles
3. characteristics of vehicles, detailed truck usage information
4. origin and destination, trip data
5. characteristics of freight (shipment size, packaging)
6. how much it costs for various commodities
7. kinds of service (frequency and quality)
8. what kinds of goods go with land transport uses
9. resource inputs, productivity data

B. Methodology: How to create a framework for analyzing and forecasting the demand for urban goods distribution within urban areas

1. how to identify and characterize demands, how to measure them, how to obtain relevant information about them
2. what modes, what's being carried
3. what data is collected regularly
4. what special studies have been completed
5. what are on-going studies
6. what models or analytical techniques are used
7. what techniques are being developed both for data collection and data analysis

¹ Urban goods movement is the transportation of, and terminal activities associated with, the movement of things as opposed to people in urban areas. It includes movement of things into and out of the area, through the area, as well as within the area by all modes, including: the long distance transmission of electricity to the extent that it substitutes for Approved For Release 2001/11/15 : CIA-RDP79-06708A000200020008-6 of petroleum, water etc.; the collection and movement of trash and mail; service truck movement not identified as the movement

8. what are criteria for determining terminal locations
9. how are tradeoffs among various types of urban freight systems in terms of performance, capital costs, operating costs, amount of space required for right-of-way, determined
10. how are the social costs measured
11. what are system performance criteria and how are they determined

C. Management/Institutional Structure

1. Agencies

a. types

- (1) operating (shippers, carters, trucking, terminal operators)
- (2) planning
- (3) policy making
- (4) regulatory
- (5) financial

b. data on each

- (1) employees
- (2) budget
- (3) revenue, expenditures
- (4) specific responsibilities in term of commodities and type of service

2. How decisions are made

- a. how do other levels of government affect municipal operations
- b. relationship to transportation, environmental, economic and land use functions
- c. relationships to the overall economic and local production plans
- d. is institutional fragmentation a problem
- e. how transportation for small, new industry arranged

goods movement, such as shopping trips. Activities involving urban streets, waterways, terminals, loading and unloading docks, and internal distribution systems including elevators and related facilities should be included.

D. Operations: how system works

1. Facilities

- a. specific types (loading, unloading)
- b. terminals (air, water, rail, truck)
- c. intercity interface facilities
- d. intermodal terminal complexes
- e. use of street cars for freight
- f. consolidated pick-up and delivery systems

2. Commodity flow illustrations

3. Manpower

- a. number and types employed in different operations
(truckers, terminals, etc.)
- b. policies and practices
- c. productivity issues

4. Truck routing and work scheduling systems

5. Measures of productivity: channels of performance review
and evaluation

6. Other issues and problems

- a. effects on traffic (flow and congestion)
- b. loading and unloading
- c. safety and security
- d. pricing: how to decide what to charge for delivery;
for sending package
- e. land-use implications
- f. packaging: standards
- g. pollution and energy implications

E. Establishment of New Transport Methods

1. Current Models

- physical characteristics
- operational character.

2. Experimental Models and New Developments

3. Containerization

F. Computer Application and Other Technology

1. Planning -- long-range
2. Operations -- short range
 - a. routing
 - b. parcel identification
 - c. facilities
3. Technology and labor productivity

G. Consequences

1. Urban economic performance
2. Environmental concerns and impacts
3. Work places and their distribution
4. Issues of urban efficiency, energy conservation

H. Future Plans

1. improvements and innovations planned
2. institutional changes
3. facility and truck improvements
4. building design
5. urbanization trends (density, role of city)
6. Urban planning considerations
7. Traffic planning considerations